

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

HONEYWELL INTERNATIONAL INC.
and HONEYWELL INTELLECTUAL
PROPERTIES INC.,

Plaintiffs,

v.

C.A. No. 99-309-GMS

HAMILTON SUNDSTRAND CORPORATION,

Defendant.

HONEYWELL'S TRIAL BRIEF

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INTRODUCTION

This matter is on remand from the U.S. Court of Appeals for the Federal Circuit for a determination by this Court of whether Honeywell surrendered during prosecution coverage of the APS 3200 surge control system that the jury found infringed Honeywell's patents under the doctrine of equivalents. Honeywell's proof successfully rebuts the prosecution history estoppel presumption under the criteria established by the Supreme Court in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002), and confirms that Honeywell did not surrender the infringing Sundstrand system when it amended its patent claims.

The Supreme Court has explained that the overall focus in determining whether a patent-holder has rebutted the *Festo* presumption is whether the narrowing amendment "surrender[ed] the particular equivalent in question." *Festo*, 535 U.S. at 740. Signally, this Court has already held as a matter of fact that "Honeywell did not give up an embodiment of the invention with the inlet guide vane" and that "the elements at issue were not surrendered" during prosecution. *Honeywell Int'l Inc. v. Hamilton Sundstrand Corp.*, No. Civ.A. 99-309 GMS, 2001 WL 66348, at *6 (D. Del. Jan. 8, 2001) (Ex. 1). Now, on remand, the Court should confirm its earlier factual ruling and hold as a matter of law that Honeywell has successfully rebutted the *Festo* presumption and that the jury's February 2001 finding of infringement was legally proper and must be reinstated.

The Supreme Court in *Festo* established three alternate ways in which to rebut the presumption of surrender of equivalents. 535 U.S. at 740-41. While Honeywell must only prove that any one of these has been satisfied in order to prevail, in fact Honeywell will show that all three have been satisfied here.

First, Honeywell will establish that the rationale underlying the prosecution amendments bore "no more than a tangential relation to the equivalent in question." *Festo*, 535 U.S. at 740.

The focus of the tangential relation test is on the *reason* for the amendments, which the prosecution history here establishes was completely unrelated to the Sundstrand equivalent. The prior art cited by the Examiner that gave rise to the amendments at issue did not mention or relate in any way to the equivalent and concerned instead other features of the invention. In such instances, courts have held that the rationale underlying the amendment bears no more than a tangential relation to the equivalent in question and that the patent owner has therefore successfully rebutted the *Festo* presumption. *See, e.g., Insituform Tech., Inc. v. CAT Contr., Inc.*, 385 F.3d 1360 (Fed. Cir. 2004); *Cordis Corp. v. Medtronic Ave., Inc.*, 336 F. Supp. 2d 363 (D. Del. 2004).

Next, Honeywell will demonstrate that the Sundstrand equivalent was later-developed technology that would have been unforeseeable to one of ordinary skill in the art at the time of the amendments in 1982-83. *Festo*, 535 U.S. at 740. It is undisputed that Sundstrand did not begin developing its infringing surge control system until 1989 and did not finalize it until 1995, long after the amendments. In addition, Sundstrand's own technical expert, Francis Shinskey, testified that the Sundstrand surge control system used a "unique" flow-related parameter that had "not [been] described elsewhere in patents or prior art." November 10, 2000 Expert Report of Francis Shinskey at 9 (Ex. 2). Indeed, when faced with this unique parameter and the flow curve that it produced, Sundstrand struggled for four years with various experimentation and failed development work before settling upon its infringing system more than a decade after the Honeywell patent amendments. These facts dictate a finding of unforeseeability. *See, e.g., BEI Tech., Inc. v. Matsushita Elec. Indus. Co.*, 268 F.Supp. 2d 782, 801-02 (E.D. Mich. 2003).

Finally, Honeywell will also establish that compelling "other reasons" exist why it could not reasonably be expected to have described literally in the patent application the equivalent

used by Sundstrand. *Festo*, 535 U.S. at 741. In particular, Honeywell will establish that in 1982-83, a reasonable patent attorney practicing before the Patent and Trademark Office would not have believed that he had surrendered the equivalent during prosecution. In addition, Honeywell will establish that a person skilled in the art would have believed, had he known of the APS 3200 surge control system when the amendments were made, that the claim language literally covered the infringing system. *See, e.g., Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 287 F. Supp. 2d 126, 158-59 (D. Mass. 2003) (finding *Festo* presumption rebutted on this basis).

Much of the evidence supporting Honeywell's position on each of these issues has already been presented to the Court during the course of the February 2001 jury trial. Other supporting evidence will be adduced during the upcoming March 23-24, 2006 bench trial. This brief explains the governing legal standards and then lays out the existing and anticipated evidence showing that Honeywell has satisfied the standards applied by the Supreme Court and the Federal Circuit and demonstrating that the jury verdict must be reinstated.

STATEMENT OF FACTS

We recognize that the Court has a long familiarity with the parties and the general technology involved in this dispute, so we set forth here only those facts directly relevant to this proceeding.

I. Overview Of Parties And Technology.

Honeywell is a diversified technology company that sells aerospace products; control technologies for buildings, homes and industry; automotive products; power generation systems; specialty chemicals; fibers; plastics and advanced materials. *See* February 2001 Trial Transcript at 315-317 (Ex. 3). The Honeywell Aerospace business is a leading provider of integrated avionics, engines and components for aircraft. *Id.* Defendant Hamilton Sundstrand manufactures and markets aerospace and industrial products. *Id.* at 1239-1240. Sundstrand's

aerospace business provides system components and services for the commercial and military aerospace industries. *Id.*

This case is a patent infringement suit involving two Honeywell patents relating to auxiliary power units or “APUs.” An APU is a gas turbine engine, typically located in the tail section of large commercial aircraft, used to supply compressed air and electrical power to the aircraft before the main engines are started, such as when the aircraft is parked at the gate. *Id.* at 569-570. Honeywell has been the leading pioneer in APU technology since it designed and manufactured the very first APU over fifty years ago. *Id.* at 319-321. Honeywell and Sundstrand compete directly for sales of APUs and associated aftermarket parts and services; indeed, Honeywell and Sundstrand are the only two major APU manufacturers in the world. *See, e.g., id.* at 852-853.

An APU utilizes a load compressor to draw in ambient air, compress that air, and supply the appropriate amount of compressed air for the aircraft’s varying demands. *Id.* at 570. Because the aircraft’s need for compressed air can vary greatly over short periods of time, there is a risk of flow instability, or surge. *Id.* at 588-592. Surge occurs when there is insufficient airflow through the load compressor, preventing air from exiting the compressor and instead causing it to reverse direction and surge back. *Id.* The resulting flow and pressure instability can damage or destroy the APU. *Id.* The Honeywell patents relate to a system and method for controlling surge in APUs.

II. The Patents-In-Suit And Their Prosecution History.

The two Honeywell patents-in-suit, U.S. Patent Nos. 4,380,893 (“the ‘893 patent”) and 4,428,194 (“the ‘194 patent”), derive from a common patent application, filed February 19, 1981. *See* ‘893 and ‘194 patents (Exs. 4 and 5). The patents were separated into two distinct applications during prosecution, with the ‘893 patent containing only apparatus claims and the

‘194 patent containing only method claims. *See* ‘194 Patent File History at HSB401563-64 (Ex. 6).

At trial, three independent claims were at issue: independent claim 4 of the ‘194 patent and independent claims 8 and 19 of the ‘893 patent. Independent claims 4, 8 and 19 appeared in the original patent applications as dependent application claims 51, 17 and 35, respectively. In each case, the claims on which they originally depended (application claims 48, 16, and 32, respectively) recited a surge control system featuring a flow-related parameter that was subject to proportional and integral control.¹ *See* Ex. 6 at HSB401556; ‘893 Patent File History at HSB401434, HSB401439-40 (Ex. 7). Those proposed independent claims, however, were rejected by the Examiner under 35 U.S.C. § 103 as being unpatentable in view of the prior art. *See* Ex. 6 at HSB401567; Ex. 7 at HSB401456-57. In particular, the Examiner cited the Shell, Rateau, and Metot patents as disclosing a surge control system for a gas turbine with P and ΔP sensors² and proportional and integral control. *Id.*

The Examiner relied primarily on the Shell prior art, a 1966 patent from the Netherlands. Ex. 8. The Shell patent claims a method for controlling surge in gas compressors independently of the pressure level at which the compressor operates. Ex. 8 at 2:61-64. The Examiner found that Shell discloses a compressor control system including a surge control valve, P and ΔP sensors, a dividing circuit and a controller. Ex. 6 at HSB401566; Ex. 7 at HSB401456-57. The Examiner further found that the Shell patent’s controller compares the quotient from the circuit

¹ Application claim 51 was dependent on application claim 49, which was in turn dependent on application claim 48. Ex. 6 at HSB401556-557. Because no analysis turns on this distinction, for the sake of simplicity we have referred in the discussion of the prosecution history to application claim 48.

² “P” and “ ΔP ” are both forms of pressure measurements. P refers to pressure; ΔP refers to a change in pressure.

with a set point using both proportional and integral control. *Id.* The Examiner noted, however, that unlike the proposed independent claims, which vented the air from the surge control outlet to the atmosphere, the surge control outlet described in the Shell patent recycles air to the compressor inlet. *Id.* But the Examiner found that the provision for dumping instead of recycling air in a surge control system was also well known in the art, as evidenced by the Rateau and Metot patents. *Id.* The Rateau reference is a 1913 U.S. patent, No. 1,052,172, describing an early surge control valve for “fluid-impelling apparatus.” Ex. 9. The Metot reference is also a U.S. Patent, No. 3,411,702 from 1968, claiming a control system to maintain a constant discharge gas pressure. Ex. 10. Thus, the Examiner combined the Shell, Rateau and Metot prior art references to reject Honeywell’s application claims 16, 32, and 48 as obvious and thus unpatentable under 35 U.S.C § 103. *See* Ex. 6 at HSB401567-568; Ex. 7 at HSB401456-57.³

None of the Shell, Rateau or Metot patents makes any mention of inlet guide vane use, and there is no suggestion in any of the three patents that inlet guide vanes are used as part of the surge control system. In its responses to Honeywell’s Requests for Admission during the recent remand discovery, Sundstrand admitted “that during the prosecution of the Patents-in-Suit, the Examiner did not reference any Prior Art that disclosed inlet guide vanes or the use of their position as part of a surge control system.” Sundstrand’s Response to Request for Admission No. 5 (Ex. 12).

³ Because application claims 16 and 48 contained the additional limitation that the surge control system operate in conjunction with a “gas turbine engine,” the Examiner also relied upon the Lewis prior art reference, U.S. Patent No. 2,994,471, in combination with Shell, Rateau and Metot, to find claims 16 and 48 obvious under 35 U.S.C. § 103. Ex. 6 at HSB401567; Ex. 7 at HSB401457. The Lewis patent discloses a gas turbine engine that serves as an air compressor. Ex. 11.

At the same time that the Examiner rejected application claims 16, 32 and 48, he merely “objected to” application claims 17, 35, and 51, which had been dependent on those claims.⁴ According to the Patent Office’s Manual of Patent Examining Procedure applicable in 1982-83, the “objection” to certain claims during prosecution meant that “the form of the claim (as distinguished from its substance) is improper.” Manual of Patent Examining Procedure, June 1979, Fourth Edition, at Section 706.01 (Ex. 13) (parenthetical in original). “An example of a matter of form as to which objection is made is dependency of a claim on a rejected claim, if the dependent claim is otherwise allowable.” *Id.* Accordingly, the Examiner indicated that application claims 17, 35 and 51 “will be allowed if rewritten in independent form.” Ex. 6 at HSB401567; Ex. 7 at HSB401458. In making this statement, the Examiner did not attach any significance to, or even mention, the fact that each of those claims included, among other additional elements, the use of inlet guide vane position.⁵

In response, Honeywell cancelled application claims 16, 32 and 48 and rewrote application claims 17, 35 and 51 in independent form. Ex. 6 at HSB401570; Ex. 7 at HSB401461. According to the Federal Circuit opinion in this case, this action by Honeywell

⁴ Application claim 35 was rejected under 35 U.S.C. § 112 as being indefinite. Ex. 7 at HSB401455 (use of “flow rate” in claim is inaccurate). The Examiner indicated that application claim 35 would be “allowed if amended to overcome the rejection under 35 U.S.C. 112 and rewritten in independent form.” *Id.* at HSB401458. Honeywell amended the claim in response to the rejection, and the Examiner allowed the claim rewritten in independent form. *Id.* at 401472, 401479. The amendment in response to § 112 was to claim language different from the claim language deemed added by the Federal Circuit as a result of rewriting claim 35 from dependent to independent form. *Id.* at HSB401476.

⁵ In fact, a number of the claims **allowed** by the Examiner during the same office action did not include any use of inlet guide vane position. *See, e.g.*, Claims 1, 6, 17 and 18 of the ‘893 Patent. Ex. 4; *see also* Ex. 7 at HSB401458 (finding application claims 4, 14, 30 and 33, which correspond to the issued claims just listed, allowable). This fact makes absolutely clear that use of inlet guide vane position was not the sole basis for allowance found by the Examiner.

constituted a narrowing amendment, thus giving rise to the *Festo* presumption. *See* 370 F.3d at 1141-44. In other words, the narrowing amendments at issue consisted of the addition of the limitations found in the original independent claims to those in the original dependent claims and the cancellation of the independent claims. According to the court, this was the same as narrowing the independent claims to include the limitations of the dependent claims. *See id.*

In rewriting application claim 17 from dependent to independent form, Honeywell effectively added to the elements of original independent claim 16 four limitations, each of which had been found in original application claim 17: 1) a flow-related parameter whose value is “substantially independent of the temperature of the compressed air;” 2) a comparator means having an “adjustable control set point representing said desired value of said parameter;” and 3) a “reset signal for varying said set point as a function of the position of said inlet guide vanes” 4) “in accordance with a predetermined reset schedule.” Ex. 7 at HSB401466-67. Similarly, in amending original application claim 35 and rewriting it from dependent to independent form, Honeywell effectively added to the elements of independent claim 32 four limitations, each of which had been found in original application claim 35: 1) “a guide vane position sensor;” and 2) “a function generator;” 3) “coupled in series;” 4) “between the inlet guide vanes and said input portion of said comparator.” *Id.* at HSB401472. Finally, in amending original application claim 51 and rewriting it from dependent to independent form, Honeywell added two elements to the limitations that had been found in original independent application claim 48: 1) “adjustable inlet guide vanes;” and 2) a control system that “adjust[s] the relationship between the magnitudes of said integral and proportional control signals and the magnitudes of said parameter variations as a function of the position of the inlet guide vanes.” Ex. 6 at HSB401573.

The rewritten claims then issued without further examination. Specifically, application claims 17 and 35 issued as claims 8 and 19 of the '893 patent on April 26, 1983, and application claim 51 issued as claim 4 of the '194 patent on January 31, 1984. *See* Exs. 4 and 5.

III. The Sundstrand Infringing Surge Control System.

At trial, the jury found that the surge control system of the APS 3200 APU infringed the asserted claims of the '893 and '194 patents, including independent claims 8, 19 and 4, under the doctrine of equivalents. *See* Special Verdict Form (Ex. 14).

In the initial proceedings in this matter, Sundstrand conceded that the APS 3200 uses a "closed-loop [surge] control system" that is "based on comparing the sensed value of a parameter to a desired set point for that same parameter." August 3, 2000 Declaration of Peter Suttie at ¶ 2 (Ex. 15). Sundstrand APS 3200 Program Manager Peter Suttie explained in a sworn declaration that, "[w]hile other conventional surge control systems include sensors that detect total pressures, the control logic of the APS 3200 uses only static pressure sensors to determine its flow related parameter," a parameter denoted "DELPQP" by Sundstrand. *Id.* at ¶ 3. In the APS 3200, DELQPQ is calculated by "measuring the static pressures at two different locations within the load compressor, at the compressor outlet duct and compressor diffuser, and making a calculation involving subtracting one measurement from the other and dividing that result by the first value." *Id.* According to Sundstrand's technical expert who testified at trial, DELQPQ "constitutes a ***unique measure*** of potential surge conditions within a centrifugal compressor, a measure ***not described elsewhere in patents or prior art***." Ex. 2 at 9 (emphasis added).

Sundstrand did not start developing the APS 3200 surge control system until 1989, long after the prosecution of the Honeywell patents had been completed. *See, e.g.*, Ex. 3 at 1254-55, 1257; *see also* Ex. 12 at Response No. 3. Around 1991, during the initial development of the APS 3200, Sundstrand discovered that the DELQPQ parameter used by the APS 3200 surge

control system produced a response curve that was not directly proportional to flow at all levels. Instead, “[w]hile the value of DELPQP initially rises as flow through the compressor increases, at an inflection point it peaks and thereafter actually decreases as flow further increases.” Ex. 15 at ¶ 11; *see also* Ex. 16 (1991 Sundstrand Coordination Memo).

It took Sundstrand nearly four years of failed experimental and development efforts to address and resolve the problems created by this behavior of the DELPQP variable. Ex. 15 at ¶¶ 11-14. In a February 1, 1993 memo to APS 3200 project manager Suttie, for example, Sundstrand engineer Koresh Mehr-Ayin noted that while the system “is correctly interpreting the inputs as being on the left side of the curve,” “the load compressor is physically operating on the right side of the curve.” Ex. 17. A memo dated several months later reiterated the need to “urgently define a better method of determining which side of the ΔP/P curve the load compressor is operating on.” Ex. 18. In November 1994, another Sundstrand memo reiterated that correctly interpreting the DELPQP flow curve remained even at that date a “critical problem” in need of resolution. Ex. 19.

Eventually, during the course of 1995, Sundstrand discovered that it could address the DELPQP phenomenon by employing a test that measured inlet guide vane position to determine whether the DELPQP variable was on the right or left side of the inflection point. Ex. 15 at ¶¶ 13-14. Thus, the production APS 3200 surge control system, which was the subject of the February 2001 trial, used inlet guide vane position to determine whether and how to use the DELPQP flow parameter in operation of the surge control valve. Ex. 15 at ¶ 14; *see also* Ex. 3 at 1579-80.

PROCEDURAL HISTORY

Honeywell filed this suit in May 1999. Prior to trial, Sundstrand moved for summary judgment, claiming that Honeywell should be precluded from establishing infringement under the doctrine of equivalents because of amendments it had made during prosecution of the patents-in-suit. At the time of Sundstrand's motion, the Federal Circuit had recently issued its initial *en banc* opinion in *Festo*, which had established that prosecution history estoppel applied in the case of a narrowing amendment made for reasons related to patentability and held that such estoppel erected a complete, irrefutable bar to claims of infringement under the doctrine of equivalents. *Festo*, 172 F.3d 1361 (Fed. Cir. 1999) (*en banc*).

In ruling on Sundstrand's summary judgment motion, this Court reviewed the law of prosecution history estoppel as it then stood. Ex. 1 at *3-*5. The Court then indicated that it would "engage in a detailed review of the relevant prosecution history," and made various findings of fact regarding the Honeywell patent file. *Id.* at *5. In particular, reviewing the prosecution history discussed above, the Court found that "Honeywell did not surrender the elements at issue during the prosecution of the patents at issue," and that "Honeywell did not give up an embodiment of the invention with the inlet guide vane." *Id.* at *6. The Court then concluded as a matter of law that prosecution history estoppel did not apply because, in its view, there had been no narrowing amendment of the asserted claims when the formerly dependent application claims were merely rewritten in independent form. *Id.*

At trial in February 2001, Honeywell presented evidence that Sundstrand's APS 3200 surge control system infringed the patents-in-suit both literally and under the doctrine of equivalents. Honeywell relied on the testimony of both its own technical expert, Gerard Muller, and that of Sundstrand's expert, Francis Shinskey, to contend that the APS 3200 infringed the Honeywell patents. *See, e.g.* Ex. 3 at 2545-2552. After a ten-day trial before this Court, the jury

found that Sundstrand willfully infringed under the doctrine of equivalents all six asserted patent claims and awarded Honeywell \$46.6 million in damages. *See* Ex. 14. The Court affirmed the jury verdict in full in response to the parties' post-trial motions. *Honeywell Int'l Inc. v. Hamilton Sundstrand Corp.*, 166 F. Supp. 1008 (D. Del. 2001).

An appeal to the Federal Circuit ensued. After the case was argued to a three-judge panel of that court in August 2002, the appellate court, *sua sponte*, ordered in February 2004 that the case would be resolved by the *en banc* court. In June 2004, the *en banc* Federal Circuit held for the first time that Honeywell's act of rewriting the dependent claims in independent form, when combined with its cancellation of the antecedent independent claims, constituted a narrowing amendment and therefore gave rise to a presumptive surrender of equivalents by virtue of prosecution history estoppel. *Honeywell Int'l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1134 (Fed. Cir. 2004) (*en banc*), *cert. denied*, 125 S.Ct. 2928 (June 20, 2005) (No. 04-293). While the Federal Circuit thus reversed this Court's prior legal conclusion regarding the effect of the rewriting of dependent claims into independent form, it did not purport to pass upon this Court's detailed factual findings regarding the course of prosecution of the Honeywell patents.

The *en banc* Federal Circuit also affirmed the jury's conclusion that Honeywell's patents were valid. *See* 370 F.3d at 1145-46. The Federal Circuit therefore vacated the judgment of infringement and remanded the case to this Court for a determination of whether Honeywell can rebut the presumption of surrender of equivalents under the criteria set forth in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002). *See* 370 F.3d at 1144.

Honeywell sought review of the *en banc* Federal Circuit decision from the Supreme Court, and that Court, signaling that it thought the case raised significant issues, directed the Solicitor General to submit a brief stating the views of the United States on this matter. *See*

Honeywell Int'l Inc. v. Hamilton Sundstrand Corp., 543 U.S. 954 (2004). While the Solicitor General advised the Supreme Court to deny Honeywell's petition for a writ of certiorari, he expressly stated that it was "clear" that "Honeywell is entitled to a meaningful opportunity to rebut the presumption against its invocation of the doctrine of equivalents.... The court of appeals' order remanding the case to the district court, which places this case in an interlocutory posture, will provide Honeywell with the opportunity that *Festo* envisions." Brief for United States as Amicus Curiae, *Honeywell Int'l Inc. v. Hamilton Sundstrand Corp.*, No. 04-293, at 20 (Ex. 20).

The Supreme Court denied certiorari, 125 S.Ct. 2928 (June 20, 2005), and this Court accordingly received this matter on remand.

ARGUMENT

I. Legal Principles Governing Doctrine Of Equivalents And Prosecution History Estoppel.

In rejecting the absolute bar of prosecution history estoppel advocated by the Federal Circuit in its *en banc* original *Festo* decision, the Supreme Court declared "that equivalents remain a firmly entrenched part of the settled rights protected by the patent." *Festo*, 535 U.S. at 733. Under the doctrine of equivalents, "a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997). Prosecution history estoppel "ensures that the doctrine of equivalents remains tied to its underlying purpose.... The doctrine of equivalents is premised on language's inability to capture the essence of innovation, but a prior application describing the precise element at issue undercuts that premise. In that instance the prosecution history has established that the inventor

turned his attention to the subject matter in question, knew the words for both the broader and narrower claim, and affirmatively chose the latter.” *Festo*, 535 U.S. at 734-35.

The Supreme Court held in *Festo* that a narrowing amendment made during patent prosecution presumptively prevents the patentee from capturing equivalents of the narrowed limitation in a later infringement action. 535 U.S. at 740. But the Court also held that this presumption was rebuttable if the patentee could prove that the specific equivalent at issue in a particular case had not been surrendered by the narrowing amendment. *Id.* As the Court noted:

By amending the application, the inventor is deemed to concede that the patent does not extend as far as the original claim. It does not follow, however, that the amended claim becomes so perfect in its description that no one could devise an equivalent. After amendment, as before, language remains an imperfect fit for invention. The narrowing amendment may demonstrate what the claim is not; but it may still fail to capture precisely what the claim is.

Festo, 535 U.S. at 738. The Court concluded that “the patentee should bear the burden of showing that the amendment does not surrender the particular equivalent in question,” and identified three alternative ways by which a patentee can rebut the presumption of prosecution history estoppel: (1) by proving that “the rationale underlying the amendment [bears] no more than a tangential relation to the equivalent in question;” (2) by proving that the equivalent was “unforeseeable” at the time of the amendment; or (3) by proving that there is “‘some other reason’ suggesting that the patentee could not reasonably have been expected to have described the alleged equivalent.” *Id.* at 740-41. The Supreme Court was clear in announcing this new regime that “[t]his presumption is not [] just the complete bar by another name.” *Id.* at 741.

The Federal Circuit subsequently held that the question whether the presumption is rebutted is one of law to be determined by the court. *Festo*, 344 F.3d 1359, 1367 (Fed. Cir. 2003) (*en banc*). For any factual determinations informing that question of law, the district court

acts as the finder of fact. *Id.* at 1368 n.3. Honeywell can rebut the presumption under any one of the three criteria announced by the Supreme Court in *Festo* by a preponderance of the evidence. *Cordis Corp. v. Medtronic Ave., Inc.*, 336 F. Supp. 2d 363, 367 (D. Del. 2004).

While the Supreme Court indicated that the presumption of estoppel may be rebutted by satisfaction of any of the three individual tests, it explained that the overall focus remains whether the narrowing amendment “surrender[ed] the particular equivalent in question.” *Festo*, 535 U.S. at 740. The “particular equivalent in question,” which the jury found infringed the Honeywell patents-in-suit, is the Sundstrand APS 3200 surge control system.

II. No More Than a Tangential Relation Exists Between the Amendments and the Sundstrand Equivalent.

The “tangential relation” prong of the *Festo* rebuttal test concerns whether “the rationale underlying the amendment [] bear[s] no more than a tangential relation to the equivalent in question.” *Festo*, 535 U.S. at 740. The focus of the tangential relation test is on the *reason* for the narrowing amendment. *Festo*, 344 F.3d at 1369-70. The tangential relation test “asks whether the reason for the narrowing amendment was peripheral, or not directly relevant, to the alleged equivalent.” *Id.* at 1369. The inquiry “focuses on the patentee’s objectively apparent reason for the narrowing amendment,” a reason which, “should be discernible from the prosecution history record.” *Festo*, 344 F.3d at 1369. The underlying purpose of the amendment can often be determined based on the prior art that the amendment was made to avoid. *See, e.g.* *Biagro Western Sales, Inc. v. Grow More, Inc.*, 423 F.3d 1296, 1306 (Fed. Cir. 2005); *Engineered Prod. Co. v. Donaldson Co., Inc.*, 313 F.Supp. 2d 951, 973 (N.D. Iowa 2004).

The “tangential relation” basis for rebuttal is consistent with the public notice function of prosecution history estoppel generally. Where a patentee demonstrates that the rationale underlying an amendment bears no more than a tangential relation to the equivalent, “the

amendment cannot reasonably be viewed as surrendering [that] particular equivalent.” *Festo*, 535 U.S. at 740. Because prosecution history estoppel is designed to prevent a patentee from regaining territory through an infringement action that he voluntarily surrendered during prosecution, an amendment made for a reason unrelated or only peripherally related to the equivalent does not trigger the doctrine. *Id.* at 734.

As set forth above, under the Federal Circuit ruling in this case, the relevant narrowing amendments took place on October 25, 1982 (as to the ‘893 patent) and September 1, 1983 (as to the ‘194 patent) when Honeywell responded to the Examiner’s office actions by canceling rejected independent application claims 16, 32 and 48 and rewriting dependent application claims 17, 35 and 51 in their place. *See Honeywell Int’l Inc.*, 370 F.3d at 1134; Ex. 6 at HSB401570, HSB401573; Ex. 7 at HSB401461, HSB401466, HSB401472. In each case, the rejection that precipitated Honeywell’s amendment was based on the Shell, Rateau, and Metot references, which the Examiner found disclosed surge control systems for a gas turbine engine with P and ΔP sensors and proportional and integral controls as claimed by the independent application claims. Ex. 6 at HSB401566-567; Ex. 7 at HSB401456-457. The Examiner indicated at the same time that application claims 17, 35, and 51, each of which disclosed additional elements, would be allowable if rewritten in independent form. Ex. 6 at HSB401567; Ex. 7 at HSB401458.

Accordingly, Honeywell’s rewriting of the claims in independent form bore absolutely no relationship to the Sundstrand equivalent. Significantly, none of the three references that occasioned the amendment -- Shell, Rateau, and Metot -- bears any relation to the infringing Sundstrand system. None uses Sundstrand’s “unique” DELPQP flow parameter and none made any use of inlet guide vane position as part of the surge control system. Further, in submitting

the amendments, Honeywell made absolutely no reference to the Sundstrand equivalent (whose development did not begin until years later, of course), DELPQP, or inlet guide vane position. The rationale underlying the amendments -- to overcome a rejection based on art that contained a flow-related parameter subjected to proportional and integral control -- simply had nothing to do with the Sundstrand equivalent.

Still further, the Examiner never suggested that the amended claims were allowable because they claimed a particular use of inlet guide vane position, or even because they mentioned inlet guide vane position at all. The Examiner's rejection meant that he would not accept a surge control system with a flow-related parameter subjected to integral and proportional control *alone*. But there is nothing to suggest that use of inlet guide vane position was a necessary feature of the patented system. Indeed, inlet guide vane position was never mentioned at any point in the prosecution history, either by the Examiner or by Honeywell. (As noted above, several of the claims that were allowed by the Examiner, including claims 1, 6, 17 and 18 of the '893 patent, do not contain the inlet guide vane feature.)

This case is on all fours with the Federal Circuit's decision in *Insituform Tech., Inc. v. CAT Contr., Inc.*, 385 F.3d 1360 (Fed. Cir. 2004). In *Insituform*, as here, the Federal Circuit held that there had been a narrowing amendment based on the addition of a claim limitation when a broader independent claim was canceled in favor of a narrower, originally dependent one. *Id.* at 1366. Claim 1 of Insituform's patent for an underground pipe repair method had originally not specified the number of cups that could be used to create a vacuum, but during prosecution the patentee replaced the broad, unlimited claim with a narrower claim that specified that a single cup would be used. *Id.* The process that was found to infringe under the doctrine of equivalents used multiple cups to create the vacuum. *Id.* at 1365-66.

The Federal Circuit held that Insituform had successfully rebutted the *Festo* presumption under the “tangential relation” test. *Id.* at 1368. Specifically, the court concluded that the reason the amendment had been made was to distinguish the invention from prior art that involved the placement of a compressor, not the number of cups used to create the vacuum, and that there was “no indication in the prosecution history of any relationship between the narrowing amendment and a multiple cup process, which is the alleged equivalent in this case.” *Id.* at 1370. Accordingly, the presumption was rebutted, and the jury’s infringement verdict was upheld. *Id.* at 1370-71.

The prosecution history at issue in *Insituform* tracks that of Honeywell’s patent prosecution precisely. The original independent claims all lacked the element at issue in the later equivalents dispute -- in the case of *Insituform*, cups; in the case of Honeywell, inlet guide vane position. *See id.* at 1368-70; Ex. 6 at HSB401556; Ex. 7 at HSB401434, HSB401439-40. During prosecution, in both cases the independent claims were rejected, canceled and replaced by a narrower, dependent claims that contained a version of the element at issue -- in the case of *Insituform*, a single-cup process; for Honeywell, a particular use of inlet guide vanes. *See Insituform*, 385 F.3d at 1366; Ex. 6 at HSB401570, HSB401573; Ex. 7 at HSB401461, HSB401466, HSB401472. In both cases the amendments were made to overcome prior art, and in each case the prior art being avoided did not include the element in the dependent claim that was effectively added to the broad independent claim. In the case of *Insituform* the prior art being avoided related to the location of the compressor while the added limitation concerned the number of cups. 385 F.3d at 1369-70. In Honeywell, the prior art being avoided concerned a flow-related parameter subjected to proportional and integral control while the added limitations included a reference to inlet guide vane position. Ex. 6 at HSB401566-567, HSB401573; Ex. 7

at HSB401456-57, HSB401466, HSB401472. In each case the infringer used a variation of the element that had been added -- in *Insituform*, a multi-cup process; in Honeywell, inlet guide vane position to deal with a unique parameter. Just as the Federal Circuit held in *Insituform* that there was no more than a tangential relationship between the amendment and the equivalent because “[t]here is no indication in the prosecution history of any relationship between the narrowing amendment and a multiple cup process,” 385 F.3d at 1370, so too this Court should find that Honeywell has successfully rebutted the presumption, because there is no indication in the prosecution history here of any relationship between the narrowing amendments and the Sundstrand equivalent.

There is no indication in the Honeywell prosecution history that the rationale underlying the amendments had any relation to the APS 3200 surge control system. Use of inlet guide vane position in the manner made by the surge control system of the APS 3200 -- or any use of inlet guide vane position, for that matter -- was simply never mentioned in the cited prior art or the prosecution history.⁶

Chief Judge Robinson’s decision in *Cordis Corp. v. Medtronic Ave., Inc.*, 336 F. Supp. 2d 363 (D. Del. 2004), provides further guidance and support for Honeywell’s position. In *Cordis*, the patent in suit, as in this case, was amended to overcome prior art. The court determined first that the prior art that had occasioned the amendment, as in this case, did not contain the accused equivalent. *Id.* at 369. The court next compared the prior art that had been in front of the Patent Office to the equivalent and found that they were “disparate devices with no logical connection to one another.” *Id.* Properly focusing on whether the rationale underlying the amendments –

⁶ Whether prior art *not* considered during the patent examination contained any reference to inlet guide vane position is irrelevant to the “tangential relation” inquiry, which focuses exclusively on the art before the Examiner and applicant during prosecution. *Festo*, 344 F.3d at 1370.

rather than the amendments themselves – was more than peripherally related to the equivalent in question, Chief Judge Robinson concluded that “the reason the amendments were submitted was to distinguish a prior art device that is only tangentially related to either the inventive or the accused devices,” and she accordingly held that the *Festo* presumption had been rebutted. *Id.* at 370. Similarly, because the prior art that the Honeywell amendments were made to avoid and the Sundstrand equivalent are in no way connected, the Court should find that the amendments bore no more than a tangential relation to the equivalent.⁷

By contrast, in the typical case where the “tangential relation” test has been held not satisfied, it is because the equivalent was in the prior art before the Examiner and therefore bore a direct relationship to the narrowing amendment. For example, in *Talbert Fuel Sys. Patents Co. v. Unocal Corp.*, 347 F.3d 1355 (Fed. Cir. 2003), the original application claimed a type of gasoline fuel with particular hydrocarbon mixtures but without any specification of the boiling point of the fuel. *Id.* at 1358. The Examiner rejected the claim based on a reference showing gasoline fuel with the claimed hydrocarbon mixtures and a boiling point between 390 and 420 degrees. *Id.* In response, the applicant amended the claim to add a limitation that the claimed fuel had a boiling point between 121 and 345 degrees. *Id.* The amended claim issued. The accused product had boiling points at 374 degrees and above. The Federal Circuit held that the patentee could not meet the tangential relationship test and assert that the accused product was

⁷ See also *Wham-O, Inc. v. Sport Dimension, Inc.*, 398 F. Supp. 2d 1081, 1086-87 (N.D. Cal. 2005) (finding rebuttal based on tangential relation test where amendment was based on a different distinction than was at issue with equivalent); *Engineered Prods.*, 313 F.Supp. 2d at 973 (“from ‘the context in which the amendment was made,’ and ‘focus[ing] on the patentee’s objectively apparent reason for the narrowing amendment,’ the court concludes” that the tangential relation test had been satisfied); *Vardon Golf Co., Inc. v. Karsten Manu. Corp.*, No. 99 C 2785, 2002 WL 1424567, at *4 (N.D. Ill. June 28, 2002) (finding rebuttal based on tangential relation test because “the arguments made as to these claims during their prosecution did not address the distinctions now alleged between” the patented product and the equivalent.) (Ex. 22).

equivalent because “the boiling range [was] at issue during prosecution and [was] the direct, not tangential, reason for the narrowing amendments to these claim limitations.” *Id.* at 1360. Here, by contrast, the rejection had nothing to do with the use of inlet guide vane position, and none of the prior art considered during prosecution related to inlet guide vane position. Here it is not the case, as it was in *Talbert Fuel*, that the prior art “embraced the alleged equivalent,” or that the use of inlet guide vane position was “at issue during prosecution and was the direct reason for the narrowing amendment.” Ex. 12 at Response No. 5; Ex. 7 at HSB401456-457; Ex. 6 at HSB401566-567.

Furthermore, the three asserted claims were not allowed by the Examiner merely because they added use of inlet guide vane position. Rather, each of the claims was amended to add use of inlet guide vane position as well as other features. As detailed above, the amendment to claim 8 of the ‘893 patent, for example, added four elements: 1) a flow-related parameter whose value is “substantially independent of the temperature of the compressed air;” 2) a comparator means having an “adjustable control set point representing said desired value of said parameter;” and 3) a “reset signal for varying said set point as a function of the position of said inlet guide vanes” 4) “in accordance with a predetermined reset schedule.” Ex. 7 at HSB401466-67. Similarly, the amendments to claim 19 of the ‘893 patent and claim 4 of the ‘194 patent added more elements than just the use of inlet guide vane position. *Id.* at HSB401472; Ex. 6 at HSB401573. The Examiner never indicated that he attached any particular significance to the use of inlet guide vane position, and none of the claims was allowed based solely on the addition of the inlet guide vane position. Rather, the reason for the amendments that is “objectively apparent” from the prosecution (*Festo*, 344 F.3d at 1369) was to add various additional elements to the surge control

system beyond merely the flow-related parameter subjected to proportional and integral control, which the Examiner had held unpatentable standing alone.

Nothing in the prosecution history record indicates any relationship whatsoever between the amendments at issue and the APS 3200 surge control system. Honeywell has therefore established that there is no more than a tangential relation between the amendments and the equivalent. The Court should hold that Honeywell has successfully rebutted the *Festo* presumption on this basis alone.

III. The Sundstrand Equivalent Was Unforeseeable At The Time Of The Amendments.

Second, and independently dispositive, Honeywell will demonstrate that evidence of record in this case proves that the Sundstrand equivalent was unforeseeable at the time the claims were amended in 1982 and 1983.

The Federal Circuit in its *Festo* decision on remand from the Supreme Court provided guidance on the factors influencing a finding of unforesightability:

This criterion presents an objective inquiry, asking whether the alleged equivalent would have been unforeseeable to one of ordinary skill in the art at the time of the amendment. ***Usually, if the alleged equivalent represents later-developed technology (e.g., transistors in relation to vacuum tubes, or Velcro(R) in relation to fasteners) or technology that was not known in the relevant art, then it would not have been foreseeable.*** In contrast, old technology, while not always foreseeable, would more likely have been foreseeable.

344 F.3d at 1369 (citation omitted, emphasis added).

Sundstrand's infringing APS 3200 surge control system represented later-developed technology that was not known in the relevant art in 1982-83. Importantly, as a matter of undisputed chronology, Sundstrand did not start working on the infringing system until 1989 (Ex. 3 at 1254-55, 1257), years after the Honeywell amendments at issue, and did not settle upon the final, infringing configuration until 1995 (Ex. 15 at ¶ 14), more than a decade after the

amendments. There is simply no dispute that the APS 3200 surge system is later-developed technology in the literal sense.

Moreover, as Sundstrand's long development period itself suggests, the APS 3200 surge control system represented a departure from prior surge control systems. The flow-related parameter used in the APS 3200, which Sundstrand termed DELPQP, was novel and had never before been used. This fact was verified by Sundstrand's technical expert, Francis Shinskey: "*In the author's experience*, diffuser $\Delta p/p$ [DELPQP] constitutes a *unique* measure of potential surge conditions within a centrifugal compressor, a measure not described elsewhere in patents or prior art." Ex. 2 at 9, emphases added. Mr. Shinskey similarly testified at trial that DELPQP was a "unique measurement." Ex. 3 at 1356. Mr. Shinskey also told the jury that:

In fact, the surge control variable, the variable which is used to control surge in the APS 3200, I discovered that I had *never seen that used to control surge before in any work that I had ever done or in any publications that I have ever read.*

Ex. 3 at 1335 (emphasis added).

As Honeywell's expert, Jerry Muller, is expected to testify at the upcoming remand trial, one reason that DELPQP is so unusual is that the two pressure sensors that produce the measurement are located in the compressor outlet duct and in the diffuser of the APS 3200, which, as Mr. Muller will explain, are counter-intuitive locations from which to measure flow through the compressor. Ex. 14 at ¶ 3.

It was Sundstrand's use of the "unique" DELPQP flow-related parameter that gave rise to its particular use of inlet guide vane position that the jury found equivalent to the Honeywell patents. Sundstrand admitted at trial that the APS 3200 used inlet guide vane position to determine whether DELPQP was in "high flow" or "low flow" mode. Mr. Shinskey, Sundstrand's technical expert, admitted on cross-examination:

Q: And it is by measuring the position of inlet guide vanes that the APS 3200 surge control system insures that it does not go into low-flow mode when it actually should be in high-flow mode, correct?

A: Correct. Ex. 3 at 1580.⁸

Shinskey further acknowledged to the jury that the “only purpose” of the inlet guide vane position in the APS 3200 surge control system “is to protect against this possibility and it’s **caused based on the unique characteristic** of the DELPQP measurement as a function of flow.” Ex. 3 at 1383 (emphasis added).

There is no evidence of any surge control system in existence in 1982-83 that -- as the infringing APS 3200 did over a decade later -- measured inlet guide vane position in order to compensate for a flow-related parameter that could indicate multiple levels of flow for a given value of the parameter. Accordingly, the Sundstrand equivalent represents later-developed technology, which was unforeseeable in 1982-83, and therefore Honeywell cannot be held to have relinquished this unknown subject matter when it amended its patent claims. *Festo*, 535 U.S. at 740.

Remarkably, Sundstrand now, on remand, tries to ignore the evidence that it introduced at trial and seeks to completely change its story and with it, its technical expert. During these remand proceedings, Sundstrand has not submitted an expert disclosure from its prior trial expert, Mr. Shinskey, and has instead replaced him with a new would-be expert, David Japikse. Japikse is apparently prepared to testify (as it he puts it in his expert report) that “[t]here was nothing novel about DELPQP in 1982.” And in a further attempt to rewrite the record, Sundstrand has Mr. Japikse claim that Hamilton Standard developed an engine, the L1011, in the 1970s with the same surge control technology as the APS 3200 -- which Sundstrand previously

⁸ Honeywell relied heavily on this admission from Shinskey when arguing infringement under the doctrine of equivalents to the jury. *See* Ex. 3 at 2548-52.

proved was newly developed in the 1990's and took nearly four years to make workable. Sundstrand never once mentioned the L1011 during the February 2001 trial.

Sundstrand's eleventh-hour attempt to contradict the proof that it submitted to the jury, in substantial part through Mr. Shinskey, is improper and unavailing, and the Court should discard it out of hand. At trial, Sundstrand presented Mr. Shinskey to the Court and the jury as, literally, a member of the "Control Hall of Fame." Ex. 3 at 1326. During closing arguments in February of 2001, Sundstrand's counsel argued to this Court and to the jury:

Mr. Shinskey is a fellow with ***decades of experience and knowledge*** about controlling compressors. And as you know, has written books and articles, and has been invited to 50 different nations around the world to give lectures about controlling compressors. ***He's the real McCoy. He's a genuine expert. He knows what he's talking about.***

Ex. 3 at 2609 (emphases added). For Sundstrand now to assert, in an effort to contradict its prior proof, that, in fact, Mr. Shinskey did ***not*** know what he was talking about and was ignorant of huge swaths of relevant prior art lacks all credibility.

The case law supports a finding of unforeseeability in the circumstances present here. For example, the patent owner in *BEI Tech., Inc. v. Matsushita Elec. Indus. Co.*, 268 F.Supp.2d 782 (E.D. Mich. 2003), established that the equivalent was unforeseeable at the time of the amendment by relying on four pieces of evidence: 1) the fact that none of the prior art references raised during prosecution had suggested or disclosed the equivalent; 2) the fact that none of the inventors were personally aware of the equivalent; 3) the fact that the infringer had not developed the equivalent until several years after prosecution of the patent; and 4) the fact that an article dated several years after prosecution of the patent had ended stated that the equivalent was a new process. *Id.* at 801-02. Signally, Honeywell can point to the same categories of evidence. It is undisputed that none of the prior art references raised during prosecution had suggested or

disclosed the equivalent. Ex. 12 at Response No. 5. Further, neither the inventors nor anyone else could have been aware of the equivalent at the time of the amendment because Sundstrand did not develop the equivalent until years after prosecution of the patents. Ex. 15 at ¶ 14. Finally, the evidence (including the testimony from Mr. Shinskey) establishes that the Sundstrand equivalent was a “unique” departure from the surge control systems “not described elsewhere in patents or prior art.” Ex. 2 at 9; *see also* Ex. 3 at 1335, 1356, 1383. This evidence, taken together, as in *BEI*, establishes that the Sundstrand equivalent was unforeseeable at the time of the amendments. *See also Festo*, 344 F.3d at 1369 (“Usually, if the alleged equivalent represents later-developed technology ... **or technology that was not known in the relevant art**, then it would not have been foreseeable.”) (emphasis added).

By contrast, the cases that have rejected patent owners’ rebuttal arguments on this prong and found equivalents to have been foreseeable have typically done so because the equivalent was disclosed within the patent file itself. *See Glaxo Wellcome, Inc. v. Impax Labs, Inc.*, 356 F.3d 1348, 1355 (Fed. Cir. 2004) (patent owner submitted references to the Patent Office disclosing the equivalent); *Ranbaxy Pharm., Inc. v. Apotex, Inc.*, 350 F.3d 1235, 1241 (Fed. Cir. 2003) (equivalent discussed in text of patent); *Sliptrack Sys., Inc. v. Steeler Metals, Inc.*, No. C-04-0462 PVT, 2004 WL 2323935, *9 (N.D. Cal. Oct. 12, 2004) (“[t]he very equivalent in question was disclosed in the specification as a ‘preferred method of assembly.’”) (Ex. 23); *Competitive Tech., Inc. v. Fujitsu Ltd.*, 333 F.Supp. 2d 858, 887 (N.D. Cal. 2004) (“it is clear from *the patent itself* that the inventors were not only aware that the timing of switching was a significant issue, but also that in the prior art” the equivalent was disclosed) (emphasis added); *see also Research Plastics, Inc. v. Federal Packaging Corp.*, 421 F.3d 1290, 1299 (Fed. Cir. 2005) (equivalent was disclosed in art that was subject of prosecution); *Pioneer Magnetics, Inc.*

v. Micro Linear Corp., 330 F.3d 1352, 1357 (Fed. Cir. 2003) (same); *Bio-Rad Labs, Inc. v. Applera Corp.*, No. C 02-05946 JW, 2005 WL 2008020, at *6 (N.D. Cal. Aug. 12, 2005) (same) (Ex. 24) ; *NPC, Inc. v. International Precast Supply, Inc.*, 337 F.Supp. 2d 378, 393 (D.N.H. 2004) (same); *Talbert*, 347 F.3d at 1359 (same). It is undisputed that in this case the equivalent can not be found anywhere in the prosecution history.

The Sundstrand equivalent uses a unique flow parameter that gave rise to a unique use of inlet guide vane position, neither of which was known in the art at the time of the amendments. This is the very definition of an equivalent that was unforeseeable and therefore that was not disclaimed by the narrowing amendment. Where, as here, the equivalent at issue is “qualitatively different than what went before,” it was “not foreseeable at the relevant time” and the patent holder “is not estopped from arguing infringement by the doctrine of equivalents.” *BEI Tech., Inc.*, 268 F.Supp.2d at 802.

IV. “Other Reasons” Exist Why Honeywell Could Not Reasonably Be Expected To Describe The Equivalent In The Amendments.

Finally, Honeywell will also prove that there are compelling “other reasons” why it could not reasonably be expected to have described literally in its patent application the equivalent used by Sundstrand. In particular, Honeywell will establish that in 1982-83, a reasonable patent attorney practicing before the Patent and Trademark Office would not have seen the need to claim the equivalent literally because he would not have believed he had surrendered it during prosecution. In addition, Honeywell will establish that a person skilled in the art, had he been aware of the Sundstrand system (which, of course, did not come into existence until many years later), would have believed that the claim language already covered it.

In announcing the bases on which a patent holder could rebut the presumption of estoppel, the Supreme Court fashioned a broad third way that a patent may rebut the *Festo*

presumption. “[T]here may be some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question.” *Festo*, 535 U.S. at 740-41. *See, e.g., Amgen*, 287 F.Supp.2d at 158-59 (finding rebuttal of *Festo* presumption based on “other reasons”); *Liquid Dynamics Corp. v. Vaughan Co., Inc.*, No. 01 C 6934, 2004 WL 2260626, at *14 (N.D. Ill. Oct. 1, 2004) (same) (Ex. 25). Extrinsic evidence is admissible to evaluate rebuttal under the third criteria, particularly regarding the reasonable expectations of the patentee. *Amgen*, 287 F.Supp. 2d at 156.

Had the mid-1990s Sundstrand surge control system found to have infringed by the jury been in existence in 1982-83, and had Honeywell been aware of it then, Honeywell reasonably would have believed that it did not surrender that system during prosecution. This is true for at least two reasons.

First, a reasonable patent practitioner in 1982-83 would not have believed that he had surrendered coverage of equivalents to inlet guide vane position use during prosecution of the ‘893 and ‘194 patents. Honeywell intends to introduce at the remand trial the expert testimony of Melvin Garner, a Principal at the law firm of Darby & Darby P.C. Mr. Garner is the current president of the American Intellectual Property Law Association and is a Past President of the New York Intellectual Property Association. Mr. Garner became a Patent Agent registered before the U.S. Patent and Trademark Office in 1972 and has prosecuted patents throughout his 30-year career.⁹ Mr. Garner is expected to testify that, based on standard prosecution practices and Patent Office procedures at the time, a reasonable patent prosecutor would not have believed it necessary to submit additional claims seeking coverage of other inlet guide vane variations. Simply put, a reasonable patent attorney at the time would not have believed that he had engaged

⁹ Mr. Garner’s complete Curriculum Vitae is attached as Exhibit 20.

in a narrowing amendment by rewriting Honeywell's original dependent application claims in independent form. Indeed, supporting proof of this resides in this Court's decision, twenty years later, that no estoppel resulted from this fact pattern (*see* Ex. 1 at *4-*6), an issue on which it took the *en banc* Federal Circuit to review and announce a new rule of law.

In addition, there is evidence that a reasonable person would have believed that the APS 3200 surge control system (had they known about that later-developed system at the time of the patent prosecution) was literally covered by claim 4 of the '194 patent. In ruling on Sundstrand's motion for summary judgment, the Court held that Honeywell had "provided evidence demonstrating that there is a genuine factual dispute as to whether every element of Claim 4 of the '194 patent is embodied in Sundstrand's APS 3200." Ex. 1 at *3. At trial, Honeywell presented substantial, competent evidence that the APS 3200 did literally infringe claim 4 of the '194 patent, including its limitation (d) relating to inlet guide vane position.¹⁰ And even Sundstrand's technical expert, Mr. Shinskey, admitted on cross-examination that in the APS 3200 surge control system the relationship between the magnitudes of the integral and proportional control signals and the magnitudes of the parameter variations is adjusted as a function of the inlet guide vanes:

Q: First of all, would you agree with me that if the APS 3200 surge control system is in low-flow mode, there is a particular relationship between the 3200's DELPQP parameter and the operation of the surge bleed valve?

A: I agree with that.

Q: And would you agree with me that if the APS 3200 surge control system is in high-flow mode, there is no relationship

¹⁰ Claim 4(d) of the '194 patent reads: "adjusting the relationship between the magnitudes of said integral and proportional control signals and the magnitudes of said parameter variations as a function of the position of the inlet guide vanes." Ex. 5 at 12:13-16.

between the parameter DELPQP and operation of the surge bleed valve?

A: That's correct.

Q: And when the APS 3200 surge control system is in low-flow mode, it is the proportional and integral control signals that control the operation of the surge bleed valve; correct?

A: Correct.

Q: And conversely, when the APS 3200 is in high-flow mode, the variations in the value of the parameter DELPQP do not affect the operation of the surge bleed valve; correct?

A: Correct. Ex. 3 at 1579-80.

Ultimately, Mr. Shinskey conceded that it is the position of the inlet guide vanes in the APS 3200 that adjusts the relationship between the magnitudes of the control signals and the magnitudes of the parameter variation as reflected by whether the APS 3200 is in high-flow or low-flow mode:

Q: And it is by measuring the position of inlet guide vanes that the APS 3200 surge control system insures that it does not go into low-flow mode when it actually should be in high-flow mode, correct?

A: Correct. Ex. 3 at 1580.

Honeywell also presented detailed evidence of Sundstrand's literal infringement through its own technical expert, Gerard Muller. Ex. 3 at 636-696.

To be sure, the jury ultimately found that claim 4 was not literally infringed, but was infringed under the doctrine of equivalents, by the APS 3200 surge control system. But the question now is not whether the APS 3200 surge control system was literally captured by the patent claim language but rather whether the patentee reasonably could have believed that to be the case in 1982-83.

The court in *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 287 F. Supp. 2d 126 (D. Mass. 2003), held that the patent owner had successfully rebutted the presumption under the third

criteria based on expert testimony “suggesting that the drafter of the amendment in question -- and those skilled in the art -- interpreted the amendment to cover” the equivalent. *Id.* at 157. The court noted that the critical question is not whether the patent holder “*could have* easily drafted an amendment that literally encompassed the equivalent” -- since it clearly could have -- but rather whether the patent holder “has shown by a fair preponderance of the evidence that those skilled in the art (and the Patent Office) interpreted the amendment to encompass the equivalent.” *Id.* at 158 (emphasis in original). *See also Liquid Dynamics Corp.*, 2004 WL 2260626 at *14 (finding rebuttal of *Festo* presumption based on “other reasons” prong) (Ex. 24).

At trial here, Honeywell intends to present expert testimony from Mr. Garner, who will explain why, from a patent prosecution attorney’s perspective, the claims would have appeared broad enough to cover the Sundstrand product, if hypothetically, and contrary to fact, it had existed and had been known at the time. Just as the court considered and credited such expert testimony in *Amgen*, this Court should hear from Mr. Garner on the issue of what a reasonable patent attorney would have believed was covered by the amended patent language in 1982-83.

In laying out the third, “other reason,” category, the Supreme Court specifically included consideration of the reasonable expectations of the patentee in the analysis of whether this criterion had been satisfied. *Festo*, 535 U.S. at 740-41; *see also Amgen*, 287 F.Supp. 2d at 156. “Thus, the Court’s analysis at this stage -- as opposed to that during claim construction -- includes a reasonableness inquiry that involves questions of equity.” *Amgen*, 287 F.Supp. 2d at 156. Based on the evidence on contemporaneous patent practices and reasonable expectations at the time that Honeywell will introduce, the Court should conclude that Honeywell has rebutted the *Festo* presumption for this independent reason as well.

CONCLUSION

For the foregoing reasons, Honeywell will rebut the presumption of prosecution history estoppel under each of the three criteria specified by the Supreme Court in *Festo*. The jury's verdict of infringement should be reinstated.

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CERTIFICATE OF SERVICE

I hereby certify that on January 30, 2006, I electronically filed the foregoing document with the Clerk of Court using CM/ECF, which will send notification of such filing to Richard D. Kirk.

I also certify that on January 30, 2006, I caused to be served true and correct copies of the foregoing document on the following in the manner indicated below:

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